

IN THE CLAIMS

Claims 1-5 and 7-18 are pending in this application. Please cancel claim 2 without prejudice or disclaimer, and amend claims 1 and 3-5, and 7-18, as follows:

1. (Currently Amended) An optical head ~~characterized by~~ comprising a light source ~~formed of an indirect semiconductor laser having an active layer structure and an asymmetric quantum well structure~~ for emitting a light beam, a lens for focusing ~~[[a]]the light beam from the light source~~ onto a medium, and a detector for detecting a reflected light beam from the medium,
wherein the light source comprises a semiconductor laser comprising an active layer and a barrier layer, said active layer being an indirect semiconductor, said indirect semiconductor having an asymmetric quantum well structure in which band structures of a conduction band and a valence band are left-right asymmetric with respect to a center of the quantum well structure in a band structure pattern.
2. (Canceled)
3. (Currently Amended) An optical head as set forth in claim 1, ~~characterized in that~~ wherein the semiconductor laser has ~~a quantum well structure for emitting a light beam, the quantum well structure comprises an active layer and a barrier layer, and an~~ which is also said indirect semiconductor material is interposed between the active layer and the barrier layer.
4. (Currently Amended) An optical head ~~characterized by a semiconductor laser having an active layer~~ as set forth in claim 1, wherein said indirect semiconductor is made of an indirect semiconductor mixed crystal material, and a detector for detecting a reflected light beam from a medium.
5. (Currently Amended) An optical head ~~characterized by a recording laser, and a~~ as set forth in claim 1, wherein said optical head is used for reproducing information from the medium. ~~laser provided independent from the recording laser, the reproducing laser being an indirect semiconductor laser.~~

6. (Canceled)
7. (Currently Amended) An optical head as set forth in claim 1, ~~characterized in that~~ wherein the indirect semiconductor has ~~an active layer structure, and~~ has an adjacent confinement structure.
8. (Currently Amended) An optical head as set forth in ~~claim 4, characterized in that~~ claim 1, wherein the material of the indirect semiconductor is of an AlGaP (aluminum, gallium and phosphor) group.
9. (Currently Amended) An optical head as set forth in claim 8, ~~characterized in that the~~ half-width value of exciting current for causing laser oscillation wherein said light beam has a continuous spectrum of which a half-value width of a main peak is not less than 20 meV but not greater than 400 meV in the form of optical energy range.
10. (Currently Amended) An optical head as set forth in claim 8, ~~characterized in that the~~ half-value width of exciting current for causing laser oscillation wherein said light beam has a continuous spectrum of which a half-value width of a main peak is not less than 6 nm but not greater than 100 nm.
11. (Currently Amended) An optical head as set forth in ~~claim 4, characterized in that~~ claim 1, wherein the material of the indirect semiconductor is of a SiGe (silicon germanium) group.
12. (Currently Amended) An optical head as set forth in claim 11, ~~characterized in that~~ the half-value width of exciting current for causing laser oscillation emits an output wherein said light beam having has a continuous spectrum of which a half-value width of a main peak is not less than 20 meV but not greater than 150 meV in the ~~form of~~ optical energy range.
13. (Currently Amended) An optical head as set forth in claim 11, ~~characterized in that~~ the half-value width of exciting current for causing laser oscillation emits an output wherein said light beam having has a continuous spectrum of which a half-value

width of a main peak is not less than 13 nm but not greater than 90 nm at a room temperature (300 K).

14. (Currently Amended) An optical head as set forth in claim 1[[4]], wherein a d.c. drive is used for driving the semiconductor laser.
15. (Currently Amended) An optical head as set forth in ~~claim 4, characterized by~~ claim 1, comprising an indirect semiconductor laser incorporating a multi-layer film reflector provided at an end face of a resonator ~~and serving as a light source.~~
16. (Currently Amended) An optical head as set forth in ~~claim 4, characterized by a semiconductor laser made of an indirect semiconductor and serving as the light source~~ claim 1, comprising and a waveband pass filter for limiting the wavelength of ~~[[a]]the~~ light beam from the semiconductor laser to be less a half-value width of 2 nm.
17. (Currently Amended) An optical head as set forth in ~~claim 4, characterized by a semiconductor laser made of an indirect semiconductor and serving as a light source,~~ and claim 1, comprising a cooler for lowering the temperature of a light emitting part of the semiconductor laser.
18. (Currently Amended) An optical disc apparatus using an optical head as set forth in claim 1[[4]].